

6th - 8th Grades

KCLPPP Lead Poisoning Curriculum Project
 Grades 6 through 8 – Curriculum Monitoring Sheets
 Fall 2002

Code	The learner will:	Activities Used/Dates Taught Teacher Notes	Assessments Teacher Notes
E-1	List or name the primary sources of lead in a child's environment (paint, dust, and soil).		
E-2	Describe the likelihood that their environment contains lead-based paint due to the age of the building.		
E-3a	Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)		
E-3b	Identify sources of lead in their own environment (add to the above: smoke from smelters/industry).		
E-4	Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).		
E-6	Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).		
E-7	Describe the impact of lead mine tailing on the Tri-state mining district, including the emissions of smelters. (Smelters separate the lead from tailings).		
E-8	Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.		
E-10	Identify steps to take to reduce lead exposure if there are lead (water) pipes in the home. (Water supply in the Tri-County area is considered safe. However, wells may be at risk and should be tested).		
E-11	Identify the elements that make a child at high risk for lead exposure.		

KCLPPP Lead Poisoning Curriculum Project
 Grades 6 through 8 – Curriculum Monitoring Sheets
 Fall 2002

Code	The learner will:	Activities Used/Dates Taught Teacher Notes	Assessments Teacher Notes
HK-1	Explain the importance of clean floors and carpets with small children, especially a crawling baby.		
HK-2	Explain the impact of wet mopping and wet dusting at least one time per week.		
HK-3	Household items used in hobbies involving lead should not be used for any other purpose.		
HY-1	Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.		
HY-2	Explain the importance of washing toys, pacifiers, and other items that children often put into their mouths.		
HY-3	Understand the role of wiping feet to remove dust.		
L-1	Know at which age children are most at risk for lead poisoning (6 months – 6 years) and why.		
L-2	Know that lead poisoning can only be diagnosed with a blood test.		
L-3	List and describe some of the possible symptoms of lead poisoning in a child, noting that often there are no apparent symptoms.		
L-6	Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.		
L-7	Describe the characteristics of lead as a metal, and why it is dangerous and prevalent in the Tri-state mining district (purposes and value as a resource).		

KCLPPP Lead Poisoning Curriculum Project
 Grades 6 through 8 – Curriculum Monitoring Sheets
 Fall 2002

Code	The learner will:	Activities Used/Dates Taught Teacher Notes	Assessments Teacher Notes
L-9	Describe the impact of lead poisoning on the body's red blood cells.		
L-11	List and explain the effects of lead poisoning at low and high levels of lead contamination.		
L-13	Explain the confusion caused by the symptoms of lead poisoning, including that many children will show no symptoms at all.		
L-16	Explain the effects of lead poisoning on the neurological system.		
N-2	Explain the importance of a well-nourished diet for children, especially in environments with high levels of lead content.		
N-4	Describe the effects an empty stomach has on lead absorption.		
N-5	Explain the need for nutritious snacks between meals, especially for children between 6 months and 6 years of age.		
N-6	Analyze the effect of a diet low in calcium and iron on children in high lead content environments.		
N-7	Using the food pyramid, select healthy foods for daily intake that contain iron, are high in calcium, and are low in fat.		
N-8	Follow the steps of careful food preparation, including food storage, to avoid further lead contamination. (Avoid using containers made from leaded crystal and glazed pottery).		
N-9	Wash vegetables and fruits carefully before food preparation and eating.		

KCLPPP Lead Poisoning Curriculum Project
 Grades 6 through 8 – Curriculum Monitoring Sheets
 Fall 2002

Code	The learner will:	Activities Used/Dates Taught Teacher Notes	Assessments Teacher Notes
P-2	List ways that lead poisoning can be prevented.		
P-3	Outline the steps that can be taken to reduce environmental exposure to lead.		
P-4	Identify the elements that make a child at high risk for lead exposure.		



Long Term Effects



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- L-16 Explain the effects of lead poisoning on the neurological system.
- L-7 Describe the characteristics of lead as a metal, and why it is dangerous and prevalent in the Tri-state mining district (purposes and value as a resource).
- L-9 Describe the impact of lead poisoning on the body's red blood cells.
- L-11 List and explain the effects of lead poisoning at low and high levels of lead contamination.
- L-13 Explain the confusion caused by the symptoms of lead poisoning, including that many children will show no symptoms at all.
- P-2 List ways that lead poisoning can be prevented.
- P-3 Outline the steps that can be taken to reduce environmental exposure to lead.
- P-4 Identify the elements that make a child at high risk for lead exposure.
- L-3 List and describe some of the possible symptoms of lead poisoning in a child, noting that often there are no apparent symptoms.

Activity Description

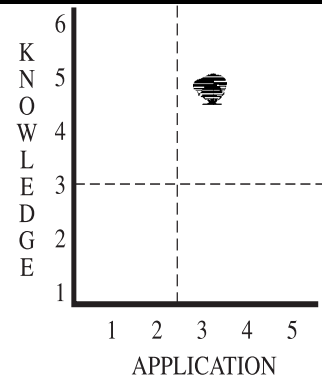
Activity – students will write a futuristic story about a community where high lead levels have existed for years, and the effects it has had on the people, the wildlife, the environment, and other parts of the community.

Materials – Paper, pen or pencil, open minds

Teacher Note – short story unit, students might expand to include solutions to the problem, could be followed up by art project on someone else's story or making story book for library or younger kids.

Knowledge/Skills

- Effects of lead poisoning
- Cause/effect analysis
- Writing Skills : Ideas and Content, Organization
- Short Story Elements



Scoring Guide

- 4 Short story included all elements of the short story in appropriate sequence. Information about lead poisoning and contamination is factual and realistic. A clear cause and effect relationship is identifiable. Story considers more than one part of the community affected by lead contamination (e.g., people, wildlife, and/or environment). To score a 4 on this task, the student must score 4s or 5s on the Six Trait Analytical Rubric.
- 3 Short story includes all elements of the short story in appropriate sequence. Information about lead poisoning and contamination is factual and mostly realistic. A clear cause and effect relationship is identifiable. Story considers one part of the community affected by lead contamination (e.g., people, wildlife, and/or environment). To score a 3 on this task, the student must score 3s or 4s on the Six Trait Analytical Rubric.
- 2 Short story includes elements of the short story out of sequence. Information about lead poisoning and contamination is mostly correct but lacks realism. A cause and effect relationship is not readily identifiable and needs further development. Story considers one part of the community affected by lead contamination (e.g. people, wildlife, and/or environment). To score a 2 on this task, the student must score 2s or 3s on the Six Trait Analytical Rubric.
- 1 Short story is missing elements of the short story and sequence is hard to follow. Information about lead poisoning and contamination included inaccuracies and lacks realism. A cause and effect relationship is not readily identifiable and needs further development. Story considers one part of the community affected by lead contamination (e.g., people, wildlife, and/or environment). To score a 1 on this task, the student must score 1s or 2s on the Six Trait Analytical Rubric.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :







Dorothy Wahl - Columbus, KS

Nancy Horton - Miami, OK

Jim Benson – Joplin, MO

Six Trait Analytical Model Assessment Rubric
 SEK ESC – Greenbush Communications Curriculum
 Grade 8
 For Compositional Writing – Spring 1998

Name/Title _____

	5	4	3	2	1
Ideas and Content 	Topic is narrowed to fit the assignment. Original ideas from personal experience. Main idea of the writing is easy to find. All details are important to the main idea. Enough information is given to fully develop the main idea. Used prewriting strategies.		Topic is understood. Some ideas are new, but others are predictable. Sometimes the main idea is clear, but other times it is confusing. Lacks balance. Some details are too general; they do not add any specific information to the paper. No prewriting strategies used.		Paper is too short to develop the main ideas. Topic or main idea not clear. Details are vague, unrelated, and/or confusing.
Organization 	Paper includes an interesting introduction that gets the reader's attention. Paper has a conclusion that summarizes the main idea and lets the reader know that the paper is finished or resolved. Details are in the proper order; sequencing is logical and effective. The organization of the paragraph and use of transitions move the reader through the paper smoothly.		Introduction does not introduce the topic in an interesting way or hint at what is coming. Conclusion does not summarize or let the reader know that the paper is finished. Details do not always fit where they are placed. Organization of the paragraphs may be confusion.		Introduction and/or conclusion are missing. Organization of details is confusing. Sequencing is weak.
Voice 	Readers can sense the writer's enthusiasm and interest in the topic. Writer shares honest feelings; written from the heart. Writer shows, not tells, the reader what is happening. Uses voice appropriate for the purpose and the audience.		The readers can understand the topic, but the writer does not appear to really care about it. Enthusiasm and interest are hard to find. At times the reader shares honest feelings, but at other places they are hidden. The writer shows what happens in parts, but does more telling than showing.		General statements prevent the readers from seeing or caring about the topic. The writer does not appear to share honest feelings in this paper. The paper sounds as if the writer is trying to get the assignment done, but does not really care about the topic.
Word Choice 	Writing sounds natural. Strong imagery. Choose words and phrases appropriate for purpose and such audiences as peers, teachers, and community. Choose precise words such as powerful verbs, specific nouns, and vivid adjectives and adverbs.		The message gets across, but avoids new words or new ways of saying things. The writer repeats many of the same words. Written in general terms. Few strong verbs. Some slang used.		Words are often used incorrectly or inconsistently. At times it is hard to understand what the writer was trying to say. General message. Repetition distracting.
Sentence Fluency 	Sounds natural and rhythmic when read aloud. Varies sentence structure (simple, compound, complex) and the length of sentences for more effective writing. Dialogue sounds natural.		Parts of the paper sound good when aloud. Some sentences are choppy. Some sentences begin the same way. Most sentences are complete. Some sentences are the same length.		It is hard to read the paper aloud. Sentences do not express complete thoughts. Fragments/run-ons are used. No variety of sentence structure.
Writing Conventions 	Uses complete sentences. Uses appropriate paragraphing. Only light editing is needed. Spelling is correct. Capitalization is correct. Punctuation is correct: end marks, commas, quotation marks, apostrophes, underlining, colons, and semi-colons. Grammar is correct: subjective/objective/possessive pronouns, tense-verbs, word usage, irregular verbs, nouns of direct address, pronoun agreement.		Most thoughts are written as complete sentences, but some fragments or run-ons are used. Most paragraphs are complete. Spelling is usually correct. Most capitalization is correct. More editing is needed before this paper can be displayed. Grammar and punctuation are usually correct.		Sentence fragments or run-ons throughout. Paragraphing ineffective. Spelling errors are common. Errors in punctuation, grammar, and usage make it difficult to read this paper. Capitalization either missing or used incorrectly. Paper needs a lot of editing.



Field Trip with Lead Test



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-3b Identify sources of lead in their own environment (add to the above: smoke from smelters/industry).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-7 Describe the impact of lead mine tailing on the Tri-state mining district, including the emissions of smelters. (Smelters separate the lead from tailings).
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- L-7 Describe the characteristics of lead as a metal, and why it is dangerous and prevalent in the Tri-state mining district (purposes and value as a resource).
- P-2 List ways that lead poisoning can be prevented.
- P-3 Outline the steps that can be taken to reduce environmental exposure to lead.
- L-2 Know that lead poisoning can only be diagnosed with a blood test.

Activity Description

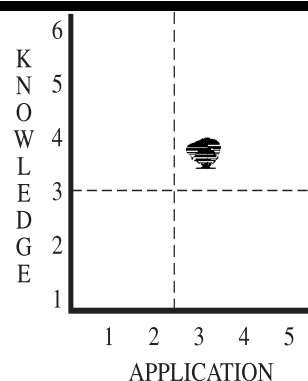
Activity – Students will have opportunity to visit an old mining area to view chat pile (Picher). Also students will stop at area county health office for a blood lead test (with parental permission). Upon returning, students will graph group results. After the graph is complete, students will write a response paragraph on the importance of the blood test. Score the paragraph.

Materials – Permission forms, buses. Also permission from site owner.

Teacher Notes – This activity should be preceded by a lead poisoning unit or local history lesson. Check with county health department about being tour guides or possibly bringing testing to school. Do not graph individual results.

Knowledge/Skills

- Observation
- Knowledge of lead mining and lead poisoning
- Knowledge that blood lead testing is the only way to know if lead poisoned
- Math skills for graphing
- Persuasive Writing



Scoring Guide

- 4 Paragraph presents the argument for the blood test and includes major and minor supports for knowing the levels of lead in the blood. Major supports include lead's effects on the body and brain, prevalence of lead in the region, and why to have the blood test. Paragraph contains no spelling errors, is well organized, and included correct facts and descriptions. The paragraph is ready to publish.
- 3 Paragraph presents the arguments for the blood test and includes major support statements for knowing the levels of lead in the blood. Major supports include lead's effects on the body and brain, prevalence of lead in the region, and why to have the blood test. Paragraph contains no spelling errors, and includes correct facts and descriptions. The paragraph may need minor revision to publish.
- 2 Paragraph presents the argument for the blood test and includes major support for knowing the levels of lead in the blood. Major support includes why to have the blood test. Major supports are limited in number and are not well developed. Paragraph contains spelling errors and includes incorrect facts and/or descriptions.
- 1 Paragraph presents no argument for the blood test and really just describes the experience, or misses the focus of the assignment in another way. Paragraph contains spelling errors and includes incorrect facts and/or descriptions.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Dorothy Wahl - Columbus, KS

Nancy Horton – Miami, OK

Jim Benson – Joplin, MO



Commercial



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-2 Describe the likelihood that their environment contains lead-based paint due to the age of the building.
- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-3b Identify sources of lead in their own environment (add to the above: smoke from smelters/industry).
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-8 Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.
- E-10 Identify steps to take to reduce lead exposure if there are lead (water) pipes in the home. (Water supply in the Tri-County area is considered safe. However, wells may be at risk and should be tested).
- HK-1 Explain the importance of clean floors and carpets with small children, especially a crawling baby.
- HK-2 Explain the impact of wet mopping and wet dusting at least one time per week.
- HK-3 Household items used in hobbies involving lead should not be used for any other purpose.
- HY-1 Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.
- HY-2 Explain the importance of washing toys, pacifiers, and other items that children often put into their mouths.
- HY-3 Understand the role of wiping feet to remove dust.
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- L-9 Describe the impact of lead poisoning on the body's red blood cells.
- L-7 Describe the characteristics of lead as a metal, and why it is dangerous and prevalent in the Tri-state mining district (purposes and value as a resource).
- L-11 List or explain common symptoms of lead poisoning.
- L-16 Explain the effects of lead poisoning on the neurological system.
- N-2 Explain the importance of a well-nourished diet for children, especially in environments with high levels of lead content.
- N-4 Describe the effects an empty stomach has on lead absorption.
- N-5 Explain the need for nutritious snacks between meals, especially for children between 6 months and 6 years of age.
- N-6 Analyze the effect of a diet low in calcium and iron on children in high lead content environments.
- N-7 Using the food pyramid, select healthy foods for daily intake that contain iron, are high in calcium, and are low in fat.
- N-8 Follow the steps of careful food preparation, including food storage, to avoid further lead contamination. (Avoid using containers made from leaded crystal and glazed pottery).
- N-9 Wash vegetables and fruits carefully before food preparation and eating.
- P-2 List ways that lead poisoning can be prevented.
- P-3 Outline the steps that can be taken to reduce environmental exposure to lead.
- P-4 Identify the elements that make a child at high risk for lead exposure.
- L-3 List and describe some of the possible symptoms of lead poisoning in a child, noting that often there are no apparent symptoms.

Activity Description

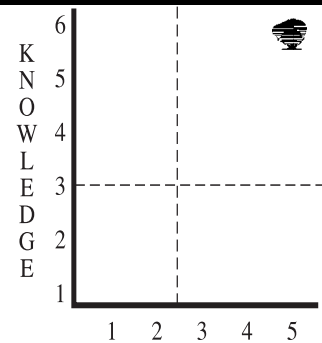
Activity – students will work in teams to develop a commercial for a lead poisoning prevention kit they design and assemble. Commercial may be video taped. Students will need to sell their kit in explaining why it is important and how to make life safer. They will write the script before video taping.

Material – Product replica, video camera, script

Teacher Note – This video might be a good one to show younger groups

Knowledge/Skills

- Lead prevention
- Writing skills
- Analyzing skills
- Acting skills
- Technology skills
- Salesmanship skills



Scoring Guide

- 4** The team works together with all members contributing. The prevention kit is developed based on factual information and serves the purpose of preventing lead poisoning. The script for the commercial is written in script format and is well developed with correct content and good presentation of the information. All members of the team are involved with speaking, directing, or filming parts. The commercial is persuasive and communicates the information about lead poisoning and prevention well to the audience. After viewing the commercial, the audience is motivated to take action (buy the kit).
- 3** The team works together with most members contributing. The prevention kit is developed based on factual information and serves the purpose of preventing lead poisoning. The script for the commercial is written in script format and is well developed and correct content. All members of the team are involved with speaking, directing, or film parts. The commercial is persuasive and communicates the information about lead poisoning and prevention. After viewing the commercial, the audience is more informed, but does not buy the kit.
- 2** The team works together with few members contributing. The prevention kit is developed based on factual information but the purpose may be questionable. The script for the commercial is written in script form with some errors in content. Most members of the team are involved in speaking, directing, or filming parts. The commercial communicates the information about lead poisoning and prevention. After viewing the commercial, the audience does not buy the kit.
- 1** The team works together with few members contributing. The prevention kit is developed based on factual information. The script for the commercial is written in script format with errors in content. The dominant members of the team are involved with speaking, directing, and filming parts. The commercial is poorly organized and does not communicate the message. After viewing the commercial, the audience does not buy the kit.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Jim Benson – Joplin, MO

Dorothy Wahl – Columbus, KS

Nancy Horton – Miami, OK



Babysitters' Guide



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- N-2 Explain the importance of a well-nourished diet for children, especially in environments with high levels of lead content.
- N-4 Describe the effects an empty stomach has on lead absorption.
- N-5 Explain the need for nutritious snacks between meals, especially for children between 6 months and 6 years of age.
- N-6 Analyze the effect of a diet low in calcium and iron on children in high lead content environments.
- N-9 Wash vegetables and fruits carefully before food preparation and eating.
- P-2 List ways that lead poisoning can be prevented.
- P-4 Identify the elements that make a child at high risk of lead exposure.
- HY-1 Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.
- HY-2 Explain the importance of washing toys, pacifiers, and other items that children often put into their mouths.
- HY-3 Understand the role of wiping feet to remove dust in preventing lead poisoning.
- HK-1 Explain the importance of clean floors and carpets with small children, especially a crawling baby.
- L-1 Know at which age children are most at risk for lead poisoning (6 months – 6 years) and why.
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, gravel, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-8 Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.

Activity Description

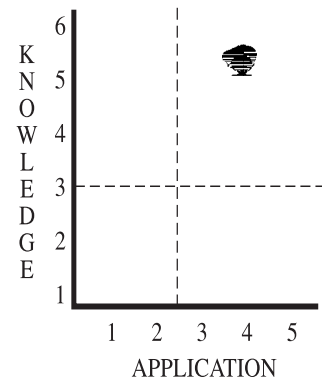
Activity – After studying the causes, consequences, and prevention of lead poisoning, students will divide into teams and create a babysitting guide for lead poisoning prevention. The guide may take the form of a pamphlet, flip book, or other form. The teacher must approve the format of the guide before students begin the real work of drafting the document. Students will write concise descriptions of information in technical writing style. The guide will be easy to read and well organized. Teachers may wish to have different class hours review guides by using the rubric below. Guides may be shared with the health department, students who baby sit, or local child care providers.

Materials – Paper, markers, other supplies. Please allow students to be creative.

Teacher Notes – All students should participate on a team, even if they don't babysit.

Knowledge/Skills

- Sources of lead poisoning
- Technical writing skills
- Document formatting for clear communication
- Organization
- Cooperative skills
- Safety information



Scoring Guide

- 4 Babysitting guide includes accurate information written in concise technical writing style. There are no spelling errors. The guide is formatted for ease of use and is easy to read and understand. The entire team worked on the guide, each member contributing ideas and information. The guide is of excellent quality and could be shared with the health department, students who baby sit, or local child care providers without revision or correction.
- 3 Babysitting guide includes accurate information written in concise technical writing style. There are no spelling errors. The guide is formatted for ease of use and is easy to read and understand. The team worked on the guide, with most members contributing ideas and information. The guide is of good quality and could be shared with the health department, students who baby sit, or local child care providers with minor revision or corrections.
- 2 Babysitting guide includes mostly accurate information written in concise technical writing style. The format needs some reworking or makes the guide difficult to use. The team worked on the guide, with most members contributing ideas and information. The guide contains good information and good ideas, but needs revision before being shared with the health department, students who baby sit, or local child care providers.
- 1 Babysitting guide includes inaccurate information. The format needs some reworking or makes the guide difficult to use. The team had difficulty working together. The guide needs major revisions before being shared with the health department, students who baby sit, or local child care providers.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Jim Benson – Joplin, MO

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK



Poster Contest



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-2 Describe the likelihood that their environment contains lead-based paint due to the age of the building.
- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.
- E-3b Identify sources of lead in their own environment (add to the above: smoke from smelters/industry).
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, gravel, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-8 Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.
- E-11 Identify the elements that make a child at high risk of lead exposure.
- HK-1 Explain the importance of clean floors and carpets with small children, especially a crawling baby.
- HK-2 Explain the impact of wet mopping and wet dusting at least one time per week.
- HK-3 Household items used in hobbies involving lead should not be used for any other purpose.
- HY-1 Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.
- HY-2 Explain the importance of washing toys, pacifiers, and other items that children often put into their mouths.
- HY-3 Understand the role of wiping feet to remove dust in preventing lead poisoning.
- N-9 Wash vegetables and fruits carefully before food preparation and eating.
- P-2 List ways that lead poisoning can be prevented.
- P-3 Outline the steps that can be taken to reduce environmental exposure to lead.
- P-4 Identify the elements that make a child at high risk for lead exposure.
- L-2 Know that lead poisoning can only be diagnosed with a blood test.

Activity Description

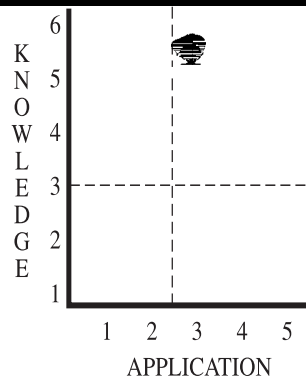
Activity – students will create posters emphasizing a lead safe environment. Students should focus on just one aspect and gear their design to be visually appealing.

Materials – Posterboard, markers, magazines to cut, paint

Teacher Note - Possible prize could be creation of a billboard made from the winning poster
Spanish students may include Spanish translations

Knowledge / Skills

- Sources of lead poisoning and prevention
- Layout and design
- Expression (visual and written message)



Scoring Guide

- 4 Poster reflects an insightful display of content and message. The poster provides accurate information and promotes lead-safe living.
- 3 Poster reflects a conventional display of content and message. The poster provides accurate information and promotes lead – safe living.
- 2 Poster reflects a conventional display of content and message. The poster includes inaccurate information and makes an attempt to promote lead – safe living.
- 1 Poster reflects a lack of content and message. Information is not included or is inaccurate. Lead-safe living is not an apparent theme in the poster.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity : Teacher, School–City State

Jim Benson – Joplin, MO

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK



Lead-Poison Prevention Wheel



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-7 Describe the impact of lead mine tailing on the Tri-state mining district, including the emissions of smelters. (Smelters separate the lead from tailings).
- HK-1 Explain the importance of clean floors and carpets with small children, especially a crawling baby.
- L-2 Know that lead poisoning can only be diagnosed with a blood test.
- HK-2 Explain the impact of wet mopping and wet dusting at least one time per week.
- HK-3 Household items used in hobbies involving lead should not be used for any other purpose.
- HY-1 Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.
- HY-3 Understand the role of wiping feet to remove dust.
- L-1 Know at which age children are most at risk for lead poisoning (6 months – 6 years) and why.
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- N-5 Explain the need for nutritious snacks between meals, especially for children between 6 months and 6 years of age.
- P-2 List ways that lead poisoning can be prevented.

Activity Description

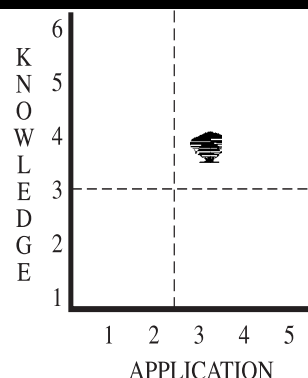
Activity – Students will design and create an educational wheel about lead poisoning. It should include: sources, solutions, and a short explanation of the importance of lead poisoning prevention. Students must choose at least 5 categories or areas of prevention.

Materials – Index weight card stock, brads

Teacher Note – Instruction about lead poisoning prevention should occur before student constructs the wheel. The end product can be given to parents of young children or the health department.

Knowledge/Skills

- Knowledge of lead poisoning
- Organization skills
- Knowledge of prevention of lead poisoning
- Cause and effect relationship
- Technical writing skills



Scoring Guide

- 4 Student constructs a wheel that includes at least 5 categories or areas of prevention. Each section of the wheel includes 3 areas; sources, solutions, and a short explanation of prevention. The wheel should be well constructed, easy to read and operate, and be completely accurate in information included.
- 3 Student constructs a wheel that includes fewer than 5 categories or areas of prevention. Each section of the wheel includes 3 areas; sources, solutions and a short explanation of prevention. The wheel is well constructed, easy to read and operate, and be completely accurate in information included.
- 2 Student constructs a wheel that includes less than 4 categories or areas of prevention. Not all 3 areas are included; sources, solutions, and a short explanation of prevention. The wheel is not well constructed or difficult to use. Inaccuracies are included in the information.
- 1 An attempt is made to construct a wheel. Information is inaccurate and not all 3 areas are included. The wheel is difficult to read and to use.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Jim Benson – Joplin, MO

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK



Lead in the Body



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- L-2 Know that lead poisoning can only be diagnosed with a blood test.
- L-3 List and describe some of the possible symptoms of lead poisoning in a child, noting that often there are no apparent symptoms.
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- L-9 Describe the impact of lead poisoning on the body's red blood cells.
- L-11 List and explain the effects of lead poisoning at low and high levels of lead contamination.
- L-13 Explain the confusion caused by the symptoms of lead poisoning, including that many children will show no symptoms at all.
- L-16 Explain the effects of lead poisoning on the neurological system.
- N-4 Describe the effects an empty stomach has on lead absorption.

Activity Description

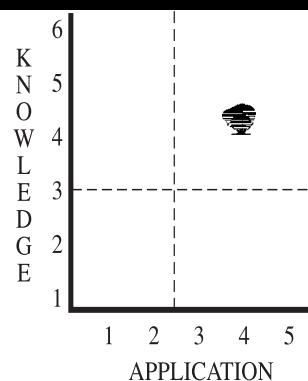
Activity – The focus of this activity is to learn about the physiological effects of lead on the body, in the body systems: nervous, circulatory, and digestive. Students will create posters or 3-D models to illustrate the effects of lead on the body. Students will work in teams. Teams will first decide which specific body system to investigate and learn about the effects of lead poisoning on that system including symptoms, physiology, and long term effects. Students will present their model to the rest of the class and will include information about prevention.

Material – Poster board, craft items, glue, markers, access to computers

Teacher Notes – Focus students on studying the body chemistry of lead poisoning. Emphasize that lead poisoning can show no symptoms or can be easily misdiagnosed. All models should include that a blood test is the best mode of detection. Also, students should complete the activity with the understanding that lead poisoning is the #1 preventable childhood poisoning condition.

Knowledge/Skills

- Understand body systems (circulatory, nervous, digestive)
- Body chemistry of a toxin – lead poisoning
- Effects of lead on the body – physiology
- Constructing models
- Presentation skills



Scoring Guide

- 4 Model illustrates the effects of lead on the chosen body system. The model considers all aspects of lead as a toxin. The model is constructed in a way that makes it helpful in instructing the effects of lead on the body. The model includes symptoms, physiology and long term effects of lead poisoning. The team's presentation is educational and communicated the information clearly. The presentation included information about the effects on the body system, symptoms found in that system, and prevention.
- 3 Model illustrates the effects of lead on the chosen body system. The model considers most aspects of lead as a toxin. The model is constructed to show how lead affects the body system. The model may include symptoms, physiology and long term effects of lead poisoning, but not all three. The team's presentation is read from the model. The presentation included information about the effects on the body system and prevention.
- 2 Model illustrates the effects of lead on the chosen body system. The model includes the body system only and not the effects of lead. The model may include physiology and long term effects of lead poisoning, but not both. The team's presentation is read from the model. The presentation included information about the body system and lead poisoning.
- 1 Model is incomplete and includes the body system only and not the effects of lead. The model includes physiology. The team's presentation is read from the model and they have difficulty answering questions. The presentation included information about the body system and lead poisoning.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Jim Benson – Joplin, MO

Dorothy Wahl - Galena, KS

Nancy Horton – Miami, OK



Class Interview



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-2 Describe the likelihood that their environment contains lead-based paint due to the age of the building.
- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-3b Identify sources of lead in their own environment (add to the above: smoke from smelters/industry).
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-6 Explain the lead hazards associated with different places (i.e.: busy streets, chat piles, building being remodeled).
- E-7 Describe the impact of lead mine tailing on the Tri-state mining district, including the emissions of smelters. (Smelters separate the lead from tailings).
- E-8 Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.
- E-11 Identify the elements that make a child at high risk of lead exposure.
- HK-3 Household items used in hobbies involving lead should not be used for any other purpose.
- HY-3 Understand the role of wiping feet to remove dust.
- L-7 Describe the characteristics of lead as a metal, and why it is dangerous and prevalent in the Tri-state mining district (purposes and value as a resource).
- P-4 Identify the elements that make a child at high risk for lead exposure.

Activity Description

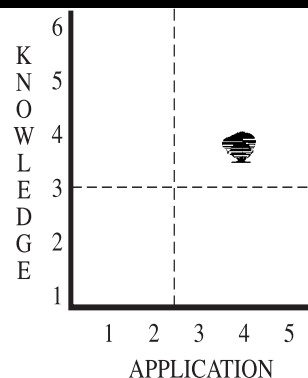
Activity – The teacher will invite a citizen who was a miner or who lived in the area during the mining era to come to class. Students will prepare questions to ask. All questions will be approved by the teacher. The interview will take place in class. All responses will be compiled into a news story format. The students will divide into teams to write a news story using the information. The news story will be scored using the Six Trait Analytical Writing Rubric.

Materials – Questions, camera, computers, survey forms

Teacher Notes – Focus students on using interview responses as a primary source in research. It will be important for students to read each other's accounts in order to determine the facts and different information that each student gleaned from the interview. The peer review may also be set up on the Six Trait Analytical Writing Rubric.

Knowledge/Skills

- Gathering information through questioning
- Interviewing skills
- Knowledge of lead mining and local history
- Writing a news story/account



Scoring Guide

- 4 Student creates a set of questions that are approved by the teacher. The student shows courtesy and appropriate communication skills during the class interview. Student's news story/account is compiled from interview notes and is scored on the Six Trait Analytical Rubric. To receive a 4 on this task, a student must score 4s and 5s on the Six Trait Rubric.
- 3 Student creates a set of questions that are approved by the teacher. The student shows courtesy and appropriate communication skills during the class interview. Student's news story/account is compiled from interview notes and is scored on the Six Trait Analytical Rubric. To receive a 3 on this task, a student must score 4s and 3s on the Six Trait Rubric.
- 2 Student creates a set of questions that are approved by the teacher. The student shows courtesy and appropriate communication skills during the class interview. Interview information is incomplete and may include inaccuracies as recorded by the student. Student's news story/account is scored on the Six Trait Analytical Rubric. To receive a 2 on this task, a student must score 2s and 3s on the Six Trait Rubric.
- 1 Student creates a set of questions that are approved by the teacher. The student shows courtesy and appropriate communication skills during the class interview. The student took few notes during the interview. Student's news story/account is scored on the Six Trait Analytical Rubric. To receive a 1 on this task, a student must score mostly 2s on the Six Trait Rubric.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity : Teacher, School-City State

Jim Benson – Joplin, MO

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK



Dangerous Hobbies



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-4 Explain the importance of keeping non-food items out of the mouth (e.g.: paint chips, dirt, toys, hands, gravel/chat, jewelry [ceramic beads, metal necklaces] and snow).
- E-11 Identify the elements that make a child at high risk for lead exposure.
- P-2 List ways that lead poisoning can be prevented.

Activity Description

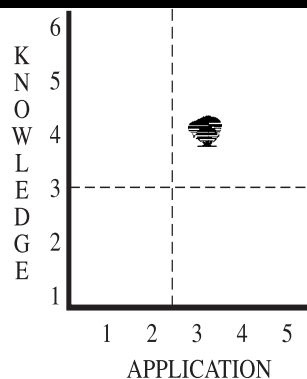
Activity – The point of this activity is for students to explore other sources of lead exposure that are not as obvious as mining and dust. There are several high-risk hobbies that present problems for lead exposure, if the lead is not handled properly. Students will divide into teams to investigate hobbies involving lead. Each team will select a hobby they have discovered. Once students have completed research into their chosen hobby, (with teacher help) they will identify someone in the area that is involved in the hobby. They will conduct an interview with that person, either in person or over the telephone. From their research and from the interview, students will compile information into a tri-fold brochure about the hobby and safety in handling lead. The tri-fold brochures may be shared with others to determine their effectiveness in disseminating information.

Materials – Book on hobbies and guests with special hobbies.

Teacher Note – Focus students on using interview responses as a primary source in research. The research they complete before the interview will help them to weigh interview responses.

Knowledge / Skills

- Gathering information
- Interviewing skills
- Knowledge of a hobby involving lead
- Communicating information in a brochure



Scoring Guide

- 4 Students will work in their team to choose a hobby to study and determine the role of lead (usually melted) in the hobby. The team identifies a person involved in the hobby. The team creates a set of questions that are approved by the teacher. The information from the research and the interview are compiled to create a brochure. The brochure will answer all questions about the hobby and the use of lead, including safety elements that should be followed. The brochure will also be designed to be visually pleasing, easy to read, and include completely accurate information. Students cite the sources of information on the brochure.
- 3 Students will work in their team to choose a hobby to study and determine the role of lead (usually melted) in the hobby. The team identifies a person involved in the hobby. The team creates a set of questions that are approved by the teacher. The information from the research and the interview are compiled to create a brochure. The brochure includes information about the hobby and the use of lead, including safety elements that should be followed. The reader may be left with questions after reading the brochure. The brochure should also be designed to be visually pleasing, easy to read, and include completely accurate information. Students cite the sources of information on the brochure.
- 2 Students will work in their team to choose a hobby to study and determine the role of lead (usually melted) in the hobby. The team identifies a person involved in the hobby. The team creates a set of questions that are approved by the teacher. The information from the research and the interview are compiled to create a brochure. The brochure includes information about the hobby and the use of lead, including safety elements that should be followed. The information in the brochure is incomplete and does not cover all the safety elements. The brochure is difficult to read and may include inaccurate information. Students cite the sources of information on the brochure.
- 1 Students will work in their team to choose a hobby to study and determine the role of lead (usually melted) in the hobby. The team identifies a person involved in the hobby. The team creates a set of questions that are approved by the teacher. The information from the research and the interview are compiled to create a brochure. The information in the brochure is incomplete and does not cover all the safety elements. The brochure is difficult to read and includes many inaccuracies. The team does not cite the sources of information on the brochure.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity : Teacher, School-City State

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK

Jim Benson – Joplin, MO

Pre-Test

1. Lead can be found in:
 - a. Dirt
 - b. Chat
 - c. Some pottery glaze
 - d. Fishing sinkers
 - e. All of the above
2. What jobs consist of working around lead
 - a. Auto mechanics
 - b. Welders
 - c. Police officers
 - d. Remodeling
 - e. All of the above
3. What are ways to reduce blood lead levels
 - a. Wash hands before you eat, after playing outside
 - b. Wash hair frequently
 - c. Drink eight glasses of water a day
 - d. Wear shoes at all times
4. What hobbies consist of being around lead
 - a. Stained glass
 - b. Making ammunition
 - c. Making fishing sinkers
 - d. Target shooting
 - e. All of the above
5. Other sources of lead include
 - a. Some folk medicine
 - b. Cosmetics
 - c. Ink on outside of bread wrapper
 - d. Oil painting
 - e. All of the above



Efficient Handwashing



Pre-K 1-2 3-5 6-8 9-12

Curriculum Indicator(s)

- E-3a Identify sources of lead in their own environment (paint chips, dirt, chat piles, dust, car exhaust, long burning candles [with lead in the wick], hobbies and crafts involving melted lead.)
- E-7 Describe the impact of lead mine tailing on the Tri-state mining district, including the emissions of smelters. (Smelters separate the lead from tailings).
- E-8 Identify household items for potential lead content: painted surfaces, window sills, door frames, porch or stair railings, play pens, cribs, painted wooden toys, newspapers, (bright and shiny) comic books, imported candy wrappers, glazed pottery, and magazines.
- HY-1 Explain the importance of washing hands before eating, before bedtime, after playing with pets, and after playing or working outside.
- HY-2 Explain the importance of washing toys, pacifiers, and other items that children often put into their mouths.
- L-1 Know at which age children are most at risk for lead poisoning (6 months – 6 years) and why.
- L-6 Describe lead poisoning as the number one preventable environmental pediatric health problem in the USA today.
- P-2 List ways that lead poisoning can be prevented.
- P-3 Outline the steps that can be taken to reduce environmental exposure to lead.
- P-4 Identify the elements that make a child at high risk for lead exposure.

Activity Description

Activity – This activity involves the use of Glo-germ, which is a commercial hand soap that students use to wash their hands. After washing and drying the hands, students put their hands under a black light to determine how efficiently they were in washing their hands.

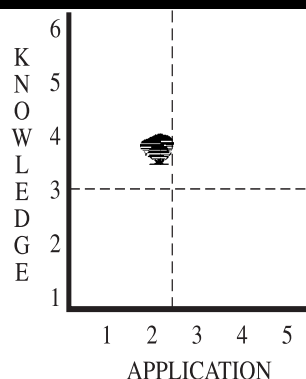
Students will receive instruction and participate in hand washing. Students will follow steps in sequence for hand washing. The class will brainstorm times when hand washing is necessary. If Glo-germ is available, the students will put their hands under a black light to determine how well they washed their hands. Students will then create 8.5” X 11” posters on the sequence of hand washing. The best of these posters will be laminated and hung over every sink in the school. If there are many more students than sinks, students may also make motivational posters about hand washing. For example, a poster for the bathroom exit door – “Did you wash your hands?”

Materials – Special sand, clay, soap, black light, model motorcycles

Teacher Note – Information about Glo-germ is located in this guide. There are other products on the market that create similar simulation.

Knowledge/Skills

- Hand washing
- Reasoning
- Sequence
- Visual aids – creating posters



Scoring Guide

- 4 Poster follows an appropriate sequence of hand washing or communicates an appropriate motivational message and is visually appealing. The poster is easy to read and is eye-catching.
- 3 Poster follows an appropriate sequence of hand washing or communicates an appropriate motivational message and is visually appealing. The poster is easy to read.
- 2 Poster may include one or more errors or the message is not clear. The poster is difficult to read due to design.
- 1 Poster may include several errors or the message is not clear. The poster is difficult to read due to design, and includes no color.

Format used with permission from the International Center for Educational Leadership, Inc.

Author(s) of this activity :

Jim Benson – Joplin, MO

Dorothy Wahl – Galena, KS

Nancy Horton – Miami, OK